UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

VIA FACSIMILE
(619) 532- 0940

December 6, 2000

Mr. Rick Weissenborn
EFDSouthwest BRAC Offices
1230 Columbia Street, Suite 1100
San Diego, CA 92101-8517

Re: Alameda NAS; U. S. EPA Review of Navy Response to Agency Comments on May , 2000 Draft Radiation Risk Assessment for OU-3 (IR Site 1), dated November 8, 2000

Dear Mr. Weissenborn:

The U.S. Environmental Protection Agency (U.S. EPA) has received and reviewed *Draft Navy Response to Comments from Regulatory Agencies on the May 22, 2000 Draft Radiation Human Health Risk Assessment for Site 1 Alameda Point*, dated November 8, 2000. Enclosed is a Memorandum providing review comments from Mr. Steve Dean, of U.S. EPA's Technical Support Team. Preliminary agency comments were provided to the Navy during the BRAC Cleanup Teams (BCT) November 28, 2000, OU-3 Radiation Meeting.

If you have any questions regarding this matter, please contact me at (415) 744-2365. Specific questions regarding Mr. Dean's Memorandum may be directed to him at (415) 744-2391.

Sincerely,

Phillip Ramsey

Phillip Ramsey
Remedial Project Manager

Enclosure

cc: Mr. Michael McClelland, Navy BEC
Ms. Mary Rose Cassa, DTSC
Mr. Brad Job, RWQCB
Ms. Dina Tisini, City of Alameda Community Development Department

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

November 30, 2000

MEMORANDUM

SUBJECT: Draft OU 3 Radiation Risk Assessment Responses to Navy Responses to EPA Comments, dated Novmeber 8, 2000

FROM: Steve M. Dean (SFD-8-B)
Superfund Technical Support Team

TO: Phillip Ramsey/ Anna-Marie Cook (SFD-8-3)

General Comment One:

This Human Health Risk Assessment In Support of Remedial Action Objectives for Radiological Materials at Operable Unit 3 Alameda Point, Alameda, California is predicated on an assumption that radium 226 in small, discrete sources along with a small number of strontium deck markers are dispersed randomly throughout OU-3. There may be other radionuclides of concern, as well, buried deep enough to avoid detection by surface surveys yet may possess different chemical and physical properties from radium and strontium. Placing a three feet thick cap over dispersed sources may offer an acceptable degree of safety. I am not convinced that the Navy has fully characterized the site the potential for consolidated subsurface radioactive waste. If such areas exist in OU-3 then additional steps will be necessary to minimize long-term health risks regardless of the proposed capping and reuse plans.

My response to the Navy's Response to General Comment One:

I have reason to suspect that the conceptual site model for the OU 3 radiation risk assessment is lacking. The assumption that the radioactive devices were randomly dispersed during initial disposal may not fully explain the condition of several of the radioactive anomalies at OU 3.

I have three pieces of information which may suggest that the random dispersal of radioactive devices occurred after their disposal at discreet locations in radioactive waste consolidation trenches. The radioactive devices were dispersed throughout OU 3 by subsequent grading of non-radioactive waste areas. Since the radioactive disposal trenches were not clearly marked or delineated, earth grading equipment operators inadvertently spread soil contaminated with radioactive devices over large areas of OU 3.

First, the Navy documents such as Naval Air Station - Alameda Initial Assessment Study (IAS) reports dating back to the early 1980's are not referenced in this radiation risk assessment. These reports may make references to radioactive disposal practices at OU 3 which employed trenching for radiation materials disposal. This type of document and perhaps others referenced within will provide more details on radiation waste issues at OU 3.

Second, a former member of RASO who now works for CaDHS claims that during radiation removal actions undertaken to expand the runway, several consolidated radioactive disposal sites were encountered. At least one area containing a high density of radioactive materials was left intact because, at that time, RASO did not think that it would impact the runway expansion project. It is even possible that the radioactive wastes removed from the construction areas may have been added to the remaining consolidated radiation disposal areas. The Navy should conduct interviews with people that have institutional knowledge of the radioactive waste issues during the runway expansion in the early 1980s.

Third, in March of 1998 I did several radiation surveys of an area at the northwest end of the runway that has surface gamma readings too high for the typical randomly disbursed radium point sources found at military landfills. The high gamma levels at the anomaly and the pattern of radium contamination in the surrounding area suggest a possible consolidated radium waste disposal area. Removal of the anomaly and further characterization of this area and other similar anomalies in OU 3 is warranted.

Specific Comment Four:

A point of clarification is necessary on an issue that arose during the meeting with the Navy, Tetra Tech, CaDHS, the City of Alameda's contractor, and US EPA at DTSC on Tuesday November 28, 2000.

The radiation risk assessment does not clearly differentiate between the waste landfill areas and other areas of OU 3. If the Navy does not add a protective cap over all of the areas impacted by radioactive contamination then those areas impacted by radium but not capped will require remediation appropriate for unrestricted use. If the Navy commits to capping all areas impacted by radium then using 20 microRoentgen per hour (uR/hr) as the cleanup level during the surface anomaly removal action seems adequate. But using 10 uR/hr as the cleanup level for radium anomaly removals in uncapped areas is <u>not</u> likely to suffice for unrestricted use.

If you have any questions or comments regarding these responses please contact me at 415 744-2391 or at dean.steve@epa.gov.

cc: Penny Leinwander (CaDHS)